

Exhibit A

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METHOD FOR PRODUCING FROTH IN A FILTER CUP OF A COFFEE MACHINE

DESCRIPTION

[0001] The present invention relates to a device and a method for producing froth in a filter cup of a coffee machine.

[0002] It is known that consumers particularly like coffee if this is made with a large amount of froth which is why there is a trend among manufacturers to build coffee machines capable of preparing drinks with an abundance of froth.

[0003] For this purpose the coffee machines presently on the market have a filter cup which holds a filter fitted with a distributor which sprays the coffee drinks towards the base of the filter cup to produce froth.

[0004] However, coffee machines of the conventional design only make it possible to produce a coffee drink having a limited amount of froth or they have devices for producing froth which are extremely expensive and therefore costly and are difficult to clean.

[0005] The technical objective of the present invention is thus to provide a device and a method for producing froth in a filter cup or a coffee machine which can eliminate the previously mentioned disadvantages of the prior art.

[0006] As part of this technical objective an object of the invention is to implement a device and a method which allow a coffee drink with an abundance of froth to be produced.

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[0007] A further object of the invention is to implement a device having a structure which is simple and reliable over time and whose costs remain within the limits.

[0008] Finally a further object of the invention is to implement a device which can be dismantled simply and quickly and can be cleaned.

[0009] The technical objective and this and further objects are achieved or solved according to the present invention by implementing a device for producing froth in a filter cup of a coffee machine, which is characterised in that it comprises at least one first element which is suitable for connection to the filter cup, comprising a distributor member for a coffee drink inside the filter cup, a conveying means for the drink in the distributor member and a means for supplying air into the distributor means to promote bubbling or bubble formation in the coffee drink and the formation of froth.

[0010] The present invention also relates to a method for producing froth in a filter cup of a coffee machine, characterised in that it comprises distributing a coffee-based drink and at the same time dispersing it with air to favour or promote bubbling in the coffee drink and the formation of froth.

[0011] Other features of the present invention will additionally be determined in the following claims.

[0012] Further features and advantages of the invention are obtained more clearly from the description of a preferred but not exclusive exemplary embodiment of the device and the method for producing froth in a filter cup of a coffee machine according to the invention wherein the device is shown as an example in the single appended drawing but is not to be understood as restricted thereto, which shows a

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cross-section through a filter cup for a coffee machine on which the device according to the invention is mounted.

[0013] With reference to the single figure, a device for producing froth in a filter cup of a coffee machine is shown wherein the filter cup as a whole has the reference number 1 and the device for producing froth has the reference number 2.

[0014] The device 2 comprises a first element 3 suitable for connection to the filter cup 1, comprising a distributor member 4 for a coffee drink inside the filter cup which is defined by a tubular section of the first element 3.

[0015] The device additionally comprises a conveying means for the drink in the distributor member 4 and a means 5 for supplying air into the distributor member 4 to promote bubbling in the coffee drink and the formation of a large quantity of froth.

[0016] The first element 3 is preferably arranged in the filter cup 1 in such a manner that it is suitable for the division into a lower chamber 8 and an upper chamber.

[0017] The conveying means comprises a second element 6 which is connected to the first element 3 and is suitable for dispensing the coffee drink to the distributor member in the form of a distributed jet.

[0018] The second element 6 preferably comprises an element which consists of an elastic flexible material (e.g. silicone) which is fitted with a hole 7 for the coffee drink to pass through and which is connected to the distributor member 4.

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[0019] The means 5 for supplying air comprises a channel 5 comprising a first end which is connected to the distributor member 4 and a second end which is connected to the lower chamber 8 of the filter cup 1.

[0020] The channel 5 is preferably determined by the allocation of the first element 3 to the second element 6.

[0021] In the example shown the channel 5 is formed by a groove which is formed on the first element 3 and is defined by the surface of the second element 6.

[0022] In addition, the distributor member 4 comprises a distributor 9 (against which the jet of coffee drink is distributed) which defines a bubble chamber 10 between the hole 7 of the second element 6 and the distributor 9. The first end of the channel 5 is advantageously connected to the bubble chamber 10.

[0023] The second element 6 has a substantially flat structure which is fitted with a central section 11 which projects from one side and which is connected to a sunken seat of the first element, and a raised circumferential edge 12 which is suitable for connection to a filter 13 of the filter cup 1 which accommodates the coffee.

[0024] The projecting central section 11 has a thin dividing wall 14 (which has the hole 7) which is suitable for dividing the central section 11 into two substantially identical compartments.

[0025] In a preferred exemplary embodiment the device 2 furthermore comprises straightening elements 15 comprising an outer cylinder/inner cylinder (or an outer thread/inner thread) in the filter cup 1 which cooperate with corresponding elements comprising outer cylinder/inner

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cylinder (or outer thread/inner thread) of the filter cup 1.

[0026] The mode of operation of the device for producing froth for a filter cup of a coffee machine according to the invention is obtained clearly from that which has been described and shown above and especially substantially from the following.

[0027] Water is allowed to pass through the filter 13 which holds the coffee powder, thus producing the coffee drink which is dispensed in the form of a distributed jet through the hole 7 in the bubble chamber 10.

[0028] In the chamber 10 the coffee drink is dispersed into small droplets and mixes with the air drawn in through the pipe 5, producing a large quantity of froth.

[0029] The frothy drink is then dispensed through the distributor 4 onto the base of the filter cup 1 and from there is distributed through two openings 16 into two cups.

[0030] The method for producing froth in a filter cup of a coffee machine consists in distributing the coffee drink and at the same time dispersing it with air to promote bubbling in the coffee drink and the formation of froth.

[0031] Before it is distributed and bubbled with air, the coffee drink is preferably dispensed in the form of a distributed jet.

[0032] In practice it has been shown that the device and the method for producing froth in a filter cup of a coffee machine according to the invention are especially advantageous since they make it possible to produce a coffee drink which is very rich in froth.

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[0033] The device and the method for producing froth in a filter cup of a coffee machine thus designed can have numerous modifications and variants which are all covered by the inventive concept. Furthermore, all details can be replaced by technically equivalent elements.

[0034] In practice, the materials used and their sizes can be arbitrary according to the requirements and the prior art.

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CLAIMS

1. A device (2) for producing froth in a filter cup (1) of a coffee machine, characterised in that it has at least one first element (3) which is suitable for connection to the filter cup (1), comprising a distributor member (4) for a coffee drink inside the filter cup (1), a conveying means for the drink in the distributor member (4) and a means for supplying air into the distributor means (4) to promote bubbling or bubble formation in the coffee drink and the formation of froth.
2. The device (2) according to claim 1, characterised in that the first element (3) in the filter cup (1) is arranged in a manner suitable for dividing the filter cup (1) into a lower chamber (8) and an upper chamber.
3. The device (2) according to any one of the preceding claims, characterised in that the conveying means comprises a second element (6) of an elastically flexible material which is fitted with a hole (7) for the coffee drink to pass through and which is connected to the distributor member (4).
4. The device (2) according to any one of the preceding claims, characterised in that the means (5) for supplying air comprises a channel (5) whose first end is connected to the distributor member (4).
5. The device (2) according to any one of the preceding claims, characterised in that the channel (5) has a second end which is connected to the lower chamber (8) of the filter cup (1).
6. The device (2) according to any one of the preceding claims, characterised in that the channel (5) is

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- defined by the allocation of the first element (3) to the second element (3).
7. The device (2) according to any one of the preceding claims, characterised in that the distributor member (4) comprises a distributor (9) of the coffee drink which defines a bubble chamber (10) between the hole (7) of the second element (6) and the distributor (9).
 8. The device (2) according to any one of the preceding claims, characterised in that the first element of the channel (5) is connected to the bubble chamber (10).
 9. The device (2) according to any one of the preceding claims, characterised in that the second element (6) has a substantially flat structure with a projecting central section (11) which is connected to a seat of the first element (3), and a raised circumferential edge (12) which is suitable for connection to a filter (13) of the filter cup (1) holding the coffee.
 10. The device (2) according to any one of the preceding claims, characterised in that the projecting central section (12) has a thin dividing wall (14) with the hole (7) for the coffee drink to pass through, wherein the dividing wall (14) is suitable for dividing the central section (11) into two substantially identical compartments.
 11. The device (2) according to any one of the preceding claims, characterised in that this has straightening elements (15) comprising an outer cylinder/inner cylinder or an outer thread/inner thread for the filter cup (1).

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12. A filter cup (1) for a coffee machine, characterised in that it comprises a device (2) for producing froth according to any one of the preceding claims.
13. A method for producing froth in a filter cup of a coffee machine, characterised in that it comprises distributing a drink and at the same time dispersing it with air to promote bubbling in the coffee drink and the formation of froth.
14. The method according to claim 13, characterised in that before the distributing and bubbling or bubble formation, the coffee drink is dispensed in the form of a distributed jet.
15. A device and a method for producing froth for a filter cup of a coffee machine as described above and claimed.

One page of drawings hereto

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ABSTRACT

A device (2) for producing froth in a filter cup (1) of a coffee machine comprises at least one first element (3) which is suitable for connection to the filter cup (1), comprising a distributor member (4) for a coffee drink inside the filter cup (1), a conveying means for the drink in the distributor member (4) and a means for supplying air into the distributor means (4) to promote bubbling or bubble formation in the coffee drink and the formation of froth. The method for producing froth in a filter cup of a coffee machine consists in distributing an air-containing drink and at the same time dispersing it with air to promote bubbling in the coffee drink and the formation of froth.